
Book Reviews

Wei SHY, ed.
CLINICAL USES OF FLUORIDE.
Philadelphia: Lea and Febiger, 1985:233. (\$29.00).

This volume contains 13 separate papers presented during a state-of-the-art conference—Clinical Uses of Fluoride—held in San Francisco in May of 1984. Also included are the subsequent discussion and open-question sessions. The opening chapter deals with the "Acceptance Programs of Fluoride Products of the American Dental Association," including the six categories of fluoride products and the numbers of each currently available. The 12 subsequent chapters collectively provide exhaustive review of both laboratory data and clinical studies related to a variety of fluoride agents.

As a collection of presentations, there was not significant overlapping material in the various presentations. The chapter by Wefel on the "Critical Assessment of Professional Application of Topical Fluorides" reviewed the efficacy of professionally applied topical agents with the conclusion that operator-applied fluorides are not cost-effective public health measures and should be utilized for high-risk, caries-active patients. The chapter on "Stannous Fluorides in Dentistry" by Tinanoff reviewed the effects of stannous fluoride agents with emphasis upon the antiplaque and specific effects against *Streptococcus mutans*. The frequency of use, product stability, concentrations, and commercial formulations were included together with an overly optimistic conclusion that stannous fluoride preparations have appeared to be strongly revitalized because of the antibacterial properties of the agents. The last chapter to deal with the professional application of fluoride agents was concerned with the "Role of the Prophylaxes and Dental Prophylaxis Pastes in Caries Prevention," by Ripa. An extensive review of studies using frequent prophylaxes conducted mostly in the Scandinavian countries revealed considerably caries reduction, but such methods do not represent cost-effective methods of caries prevention either for private practice or public health programs. This chapter also reviewed a variety of clinical trials of infrequent prophylaxes with fluoride prophylaxis pastes and the self-application of fluoride agents, and Ripa concluded that prophylaxis pastes play no direct role in the prevention of dental caries.

The chapter on "Fluoride Supplements and Dietary Sources of Fluoride" presented by Kula reviewed products available with or without vitamins and provided indications for fluoride-vitamin combinations. The total dietary fluoride and the poten-

tial for fluorosis from diet were discussed. The comprehensive discussion of prenatal fluorides concluded that there is limited clinical evidence of the cariostatic benefits of prenatal fluorides. The chapter on "Fluoride Mouthrinses" by Carlos described the rational and clinical studies for the efficacy and safety of fluoride mouthrinses. Carlos concluded that such agents will continue to play a major role in the prevention of dental decay in the future.

The chapter on "Fluorides in Periodontal Therapy" made a weak case for the preventive effects of fluorides upon periodontal disease. Although the antiplaque effects of fluorides were reviewed, the authors failed to provide substantial clinical evidence through long-term clinical studies that fluorides contribute to the prevention of periodontal disease.

The section on the "Impact of Fluorides on Root Caries and Root Dentinal Sensitivity" by Newbrun reported the effects of topical and systemic fluorides capable of providing reduction of root caries. Although fluoride compounds appeared effective in desensitizing cervical root areas, potassium nitrates and oxalates appeared at least as effective as fluorides in treating root sensitivity.

An exhaustive review of the development of fluoride dentifrices and the clinical studies of their efficacy was presented by Stookey in the chapter "Are All Fluoride Dentifrices the Same?" Extensive studies of a variety of fluoride agents and abrasive systems provided evidence of the anticaries benefits of fluoride dentifrices, and the section on remineralization of incipient enamel lesions reviewed pertinent *in vivo* studies of the effects of fluoride dentifrices upon enamel remineralization.

A subsequent presentation by Naleway reviewed the "Laboratory Methods of Assessing Fluoride Dentifrices and Other Topical Agents" and described the guidelines for the acceptance by the American Dental Association of fluoride dentifrices and the information required for those products when generic equivalents are presented. The review of APF gels included the methods for *in vitro* studies including the measure of fluoride uptake by test enamel. Additionally, the requirement for stannous gels were reviewed along with the effects of APF gels on porcelain restorations.

Although enamel remineralization was discussed in the chapter related to dentifrices, "Fluorides and Remineralization" by Silverstone represented a limited *in vitro* approach to enamel remineralization. A subsequent chapter, "New Fluoride Agents and Modalities of Delivery," reviewed ammonium, amine, and titanium fluoride

agents with the conclusion that they appeared comparable but not superior to conventional topical fluorides. Alternatives to conventional fluoride vehicles include fluoride-impregnated floss, fluoride chewing gums and varnishes, fluoride exchange resins, and continuous fluoride release devices, most of which are in the developmental stage and not generally available for current use in the United States. Fluorides in dental materials (i.e., alginates, cements, and amalgams) were reported to have only limited application in prevention.

The final chapter, "Clinical Uses of Fluorides for the Special Patient," made a convincing case for the special use of fluorides in a variety of handicapped and disabled persons. Included was a discussion of the potential for toxicity with fluorides and methods to prevent or manage such overdoses.

This book generally represents a series of well-documented papers on a variety of pertinent areas related to the clinical use of fluorides. As in any compendium of this type, there is a range of quality and relevancy of the presentations. Nevertheless, this volume is an important collective review of the clinical uses of fluoride agents in dentistry, and as such is recommended as an important guide for dental public health providers and researchers interested in the prevention of dental disease.

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Nikiforuk G.

**UNDERSTANDING DENTAL CARIES VOL 1;
ETIOLOGY AND MECHANISMS.
BASIC AND CLINICAL ASPECTS.
Basel, Switzerland: Karger, 1985:306 (approx.
\$34.75).**

This is the first of two volumes to be produced under the general title "Understanding Dental Caries." The author, Gordon Nikiforuk, who has a well-earned reputation in the field of cariology, has adopted an unusual approach to the production of this book. Although it is a multiauthored book, it suffers from none of the disadvantages usually associated with such volumes. Nikiforuk has carefully blended, and I suspect rewritten, the texts of each chapter to provide informative, highly readable chapters of uniform quality. He has also drawn heavily on an impressive list of consultants who reviewed the chapters for scientific accuracy. The book is well produced and the illustrations are uniformly excellent.

This volume is composed of 10 chapters that cover both basic science and clinical aspects of dental caries. They deal with, for example, clinical features and epidemiology of dental caries, formation of plaque, role of saliva in dental caries, and chem-

istry of caries—all written in a well-structured, logical manner that will certainly hold the reader's interest. Each chapter has a small list of references for additional reading. There is also an interesting appendix outlining the historical highlights of dental caries research.

Although the scientific quality of the text is for the most part uniformly excellent, unfortunately one or two fables have crept in. For example, applicability of experiments carried out in rodents to humans is called into question because it is stated phosphates added to the diet of rats prevents caries, whereas they are without effect in humans. There are several clinical studies that show clearly that the addition of phosphates to chewing gum render that product noncariogenic. Furthermore, this reviewer is unaware of any substance that prevents caries in animals that fails to have a comparable effect in humans when tested in a similar manner. This particular section also suffers because some of the more recent developments for assessing cariogenic potential of foods are not discussed.

This book should be attractive to practitioners, researchers, and students. It is packed with up-to-date information written in a readable style. I thoroughly recommend it and look forward to reading the next volume.

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**Weintraub JA, Douglass CW, Gillings DB.
BIOSTATS: DATA ANALYSIS FOR DENTAL
HEALTH CARE PROFESSIONALS
Newton, MA: CAVCO, Inc., 1984:257. (Softcover,
\$19.50)**

This text is a compilation of individual self-instructional packages designed to enable students to "master the basic concepts of biostatistics and epidemiology that are utilized in dental research and referred to in the dental literature." Although each chapter is a single self-contained package, succeeding chapters build on information presented earlier. Chapters begin with an introduction and a list of learning objectives and end with a review of the new material presented and a post-test to evaluate the student's progress. The student is encouraged to work problems that are scattered throughout the text with solutions provided at the end of each chapter for immediate reinforcement.

The scope of the text is truly ambitious. Each of the 19 chapters covers a separate topic ranging from the construction of data tables, development of frequency distributions and measures of central tendency to the analysis of variance, correlation, and regression. This is accomplished in only 257 pages by keeping the discussion of each topic at a relatively superficial level and presenting computa-

tional and definitional formulas without describing their mathematical derivation. Basic concepts are well explained, however, and often neglected concepts such as the difference between statistical and clinical significance are stressed. The level of sophistication and detail seems appropriate for the authors' primary purpose of providing undergraduate dental students a sufficient understanding of basic statistical methods to read and evaluate the dental literature intelligently.

Throughout the text, practical examples, many using data from published research, are used to illustrate the concepts presented. With the possible exception of the chapter on the analysis of variance (ANOVA), which is somewhat confusing and may be difficult for the unaided student, the chapters are logically organized and written in a clear and understandable manner. Although designed as self-instructional, learning would be enhanced by an accompanying short lecture or question-and-answer period to supplement the text. This supplementary teaching would be particularly important as the student progresses through the later chapters relating to hypothesis testing, statistical significance, ANOVA, and regression.

Statisticians may disagree with the presentation of statistical concepts at such an elementary level. Nevertheless, this text is an excellent example of recognition of the difference in need for familiarity with a subject area and proficiency or competency in performing procedures. Clearly dental professionals require familiarity with statistical techniques, but only a few will require proficiency at data analysis.

As an unexpected bonus the authors provide the reader with a valuable appendix that contains a description of frequently used dental indexes, (e.g., DMF, OHI, OHI-S, PDI, PI), a listing of the criteria for their use, and the original references. This appendix alone will be useful for many dental professionals.

I highly recommend the text for use at the dental undergraduate level and as a quick review for more experienced dental personnel.

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Besford J.
GOOD MOUTHKEEPING
New York: Oxford University Press
1984:viii + 191p. (Hard cover, \$10.95).

Good Mouthkeeping is a British self-help book for the layman designed to "explain first how dental

disease happens, and secondly how you can banish it altogether, or, if you are too late for that, at least stop it dead in its tracks." Part one (12 chapters) presents an explanation of dental disease and preventive measures and part two is an "information package."

Chapter one attempts to dispel the myth that losing teeth is inevitable and a part of growing old. The next five chapters define dental disease and describe the role of plaque and sugar in relation to dental caries. Special emphasis is placed on "hidden" sugars in the diet, development of snacking habits, and production of acid associated with frequent exposure to sugar.

Chapters seven and eight address cleansing techniques, toothpastes, and oral hygiene devices. A detailed procedure for brushing is presented with step-by-step directions, diagrams, and a checklist for use in the bathroom. No specific brushing technique is recommended, but the author suggests that "any method that suits you and works is good." Contrary to prevailing opinion in the US, Besford advises the purchase of medium- or hard-bristle toothbrushes because they "need to be fairly rigid to dislodge plaque and anyway will soften with age."

Chapter nine contains a clear and concise explanation of the role of fluorides and fissure sealants in strengthening teeth. Fluoride products in the form of tablets, drops, or mouthrinses are not prescription items in Great Britain. Besford tells the reader how to determine the appropriate dosage of fluoride if the community water supply does not contain optimal levels of fluoride. Interestingly, Besford does not seem to know that fluoride tablets and drops are available only by prescription in the US. His illustration of how to calculate the supplemental dosage of fluoride is not appropriate for the American reader.

The last three chapters discuss plaque and periodontal disease, the implications of losing teeth, and of going to the dentist. Besford confines his remarks about periodontal disease to a single short chapter. Caries, however, represent an almost constant theme in his book, suggesting the difference in importance assigned to these two topics in Great Britain.

Part two includes references for further reading, answers to questions, a list of sugar content of foods, drinks, and children's medicine, a glossary of dental terms, an explanation of the letters after dentists' names, and where to go to get more information. Dental information sources are provided for Australia, Canada, Hong Kong, Japan, New Zealand, the Republic of Ireland, the United Kingdom, and the United States.

The book appears to serve its purpose as a self-help manual. Its style is amusing and the information on dental disease and preventive measures is well presented. American dental health practices, laws, and opinions, however, are sufficiently dif-

ferent from those in Great Britain to limit this book's value in the United States.

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Manson-Hing LR.
FUNDAMENTALS OF DENTAL RADIOGRAPHY. 2nd ed.
Philadelphia: Lea & Febiger, 1985:236 (\$24.75).

The second edition of *Fundamentals of Dental Radiography* by Lincoln R. Manson-Hing fulfills its stated purpose of providing fundamental information needed for clinical dental radiography in a concise manner. The second edition keeps the large format, abundant illustrations, and generous amount of white space that marked the first edition. While much of the material is similar in both editions, the new version has added information on recent advances in dental radiography such as xeroradiography, new films and rare-earth intensifying screens with increased attention given to quality assurance, evaluation of technical quality of radiographs, and a self-testing exercise. A major—and welcome—addition is a discussion of risks and benefits of dental radiography, complete with average doses to various organs, risk calculations, diagnostic yield from radiographs, and the ALARA (as low as reasonably achievable) principle. The *Système Internationale*, or SI, units for measurement of radiation are briefly described but not used in discussions of dose in other chapters. Since the book was published in 1985, the year the SI units are scheduled to be adopted, it would seem appropriate to incorporate them into the book. One criticism of an otherwise excellent text is the order of presentation of intraoral techniques. By describing the bisecting angle technique before the paralleling technique of periapical radiography, the author implies that the bisecting angle technique is the preferred one, whereas many other radiologists recommend that the paralleling technique be used whenever possible.

This book would be most useful for dental auxiliaries, either in a beginning radiography course or in a refresher for trained persons, but it may not contain enough theoretical background material to satisfy many teachers of dental students. It would need to be supplemented with additional information or radiographic interpretation for dental students.

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Eversole LR.
CLINICAL OUTLINE OF ORAL PATHOLOGY, 2nd ed.
Philadelphia: Lea & Febiger, 1984:434. [\$39.50]

This is a book for the dental practitioner, the person who on a daily basis is faced with the great variety of lesions patients present. The essentials of utility, brevity, clarity, and appropriate organization are embodied within this practical tome. The list of lesions dealt with in this book is comprehensive—and yet, because the author has been unswervingly concise, ready access to identify an unknown lesion is surprisingly easy. Chapter headings are logical and the total lesional catalog is well apportioned between them. Writing style is clear, concise, and easily read.

Organization is the major feature that distinguishes this clinical outline from the classroom text. Rather than grouping diseases according to cause (etiology), which is the standard approach of the instructional text, this book groups lesions by commonality of appearance, e.g., white lesions, red lesions, and so on. This organizational style makes it easy for the clinician to address the topic of his dilemma expeditiously. The list of disease entities that accordingly must be included in the list of differential diagnosis is defined readily. Each entity is elucidated according to the "age" and "sex" predilection, as well as by the "clinical features," "microscopic features," "differential diagnosis," and "treatment." An appropriate brief list of "references" follows each diagnostic entity.

The organizational style, while lending itself to serving the practitioner's need with ease, does engender certain problems. For example, should adenoid cystic carcinoma be listed under the chapter on "intraoral soft tissue swellings" or the chapter dealing with "soft tissue swellings of the face and neck"? One answer, of course, is to list it in both places, which the author does. But here the trouble begins. Should a complete description be placed in one chapter while the heading in the second chapter refers the reader back to the primary chapter or should a duplication of the description be placed in both chapters? The author has chosen the latter course. Not only does this needlessly enlarge the book, but curiously the two headings, while similar, are not identical so that the convenience of finding it in two places is lost. Both must be read so that some important detail present in one chapter but not in the other chapter won't be overlooked.

Certain other flaws, such as the use of archaic terminology, e.g., herpes virus hominis, usually are corrected in the second edition; however, some persist. Additionally, the reference list in the second edition should have been revised more carefully to delete the older and less important references and replace them with newer and more comprehensive or significant references. For exam-

ple, following "herpes simplex virus lesions of the lips," most of the references are limited in scope, morphologic in approach, and between one and three decades old; this in an area that has undergone intensive and explosive research in the last decade especially.

The book is well illustrated with black and white clinical photographs located in the appropriate chapter positions, as well as excellent and imaginative original conceptual line drawings where general principles are to be illustrated. Additionally, the appendix contains a brief but useful compendium of some of the prescriptions most often used to

treat various oral maladies.

In summary, despite the minor deficiencies cited, this book is appropriately organized and of sufficient comprehensiveness to belong in every dental office library. The logical, clear style of the authoritative teacher will emerge to help play an invaluable chairside role in the dental office. As a clinical outline of oral pathology this book has no peer.

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Specific Instructions to Contributors to the *Journal of Public Health Dentistry*

The *Journal of Public Health Dentistry* is the official journal of the American Association of Public Health Dentistry. Manuscripts are accepted for publication on the condition that they are contributed solely to the *Journal*. Subsequent publication may be authorized at the discretion of the editor. Generally, manuscripts are scheduled several months in advance. Contributors will be notified when the manuscript has been received and will be advised of the editor's decision. In the covering letter, if the paper has been presented orally before a group, please provide the name of the group, and the date and place of the presentation.

Manuscripts are reviewed routinely by at least two referees. Editorial revisions, to add clarity and to conform to *Journal* style, likely will be made. Authors will be sent proofs of their papers to proofread for typesetting errors.

Contributors should send the editor* an original and two copies of the manuscript, and should retain at least one copy of it. For additional details on writing and manuscript publication, *Journal* contributors are referred to: Huth EJ. How to write and publish papers in the medical sciences. Philadelphia: ISI Press, c1982:203; and to Day, RA. How to write and publish a scientific paper. 2nd ed. Philadelphia: ISI Press, c1983:181.

The *Journal's* basic reference book for spelling, style, usage, word division, and punctuation is Webster's ninth new collegiate dictionary. Springfield, Mass: Merriam-Webster, 1983:1563. (It is based on Webster's third new international dictionary, unabridged.) For complete instructions on the *Journal's* style, please refer to its Winter 1985 issue (Vol. 45, No. 1).

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